



The Great Swamp Watershed Association

Across the Watershed

Fall-Winter 2015

Protecting our Waters and our Land for more than 30 Years

Stewardship Intensifies at the Conservation Management Area (CMA)

Great changes have been afoot this year at Great Swamp Watershed Association's (GSWA) property, the 53-acre Conservation Management Area (CMA), tucked away at the end of rural Tiger Lily Lane in Harding Township.

This winter, after many years of focused restoration and stewardship within the 30-acre fenced area at the end of Tiger Lily Lane, GSWA shifted its attention to a different 16-acre patch of wetland and deciduous upland forest halfway down Tiger Lily Lane. (Previously, this portion

of the CMA has been known as the Case property.)

Although GSWA manages the entire CMA as a single entity, the 30-acre fenced area—where deer cannot roam, and where native plantings and invasive species removal have had the most impact—received more public attention and many more accolades than its smaller, more reclusive neighbor.

The organization has owned the unfenced and less-visited Case tract since the late 1990s. But there may be a few things you don't know about it. Silver Brook,

an important tributary of Great Brook (one of our major watershed streams) flows along the back of the property, and the ground hosts several interesting

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Ribbon cutting for the new Horizon Trail. From left: Nic Platt, Mayor of Harding Township, Filomena Machleder, Horizon Foundation for New Jersey, and Sally Rubin, GSWA Executive Director.

From the Desk of the Executive Director



by Sally Rubin

GSWA is pleased to announce that we registered to become an accredited land trust with the Land Trust Alliance (LTA) this summer. LTA is an independent trade association for land trusts to help ensure the permanence of preserved land. It provides guidance with 88 best practices for organizations and helps organizations establish and maintain credibility for both the IRS and donors. There are 1700 land trusts in the US, 36 in New Jersey, of which only six are accredited.

This two-year intensive process will provide a detailed analysis of both the governance of the organization and our land preservation policies and practices. The objectives of accreditation are to establish and maintain practices to meet the highest standards of professional conduct and accountability. While we think we are a well-run organization now, the accreditation process will help us improve and fine tune what we do. Accreditation includes a review of all our policies, such as our whistleblower policy, privacy policy, conflict of interest policy, and financial policies, as well as conservation and land preservation policies. It also includes a review of the organizational by-laws and strategic plan.

GSWA owns four tracts of land, totaling approximately 56 acres, and two conservation

easements. Through the accreditation process, we must review our land portfolio to ensure proper documentation exists and that the properties are properly managed and monitored. We must also demonstrate that we have the necessary funds to steward our properties and for any necessary legal defense.

This process is especially helpful to GSWA as we evaluate expanding our mission to include land preservation. Our mission has always been to protect our water resources. Protecting water means protecting the land too. In addition to the properties we own or on which we hold conservation easements, GSWA has frequently played a role in preservation of land to be owned by other entities. Most recently, GSWA helped preserve 136 acres at Giralda Farms in Chatham.

So, exactly why is it important to preserve and protect land? Conservation provides jobs in industries such as agriculture, recreation and tourism. Land preservation facilitates local food production and helps filter and store water. Open space provides buffers and helps with our resilience to climate change and allows plants and animals to adapt. Additionally, open space and nature makes us feel better! It leads to better fitness and less stress. 🌲

CMA Stewardship *(continued from page 1)*

vernal (think of them as rain-fed) pools. A wetland forest is slowly maturing here and the land is interspersed with patches of oak, beech, and hickory in the more upland sections. As with other parcels owned by GSWA, Case now acts as a protective stream buffer where flood waters find a place to go during wet spells. Happily so, it also offers a place where outdoor educational opportunities are many, and a place where residents of nearby communities can get out for a healthy walk and take advantage of nature's many gifts and bounties.

Initial trail creation attempts at the Case property in 2011 were thwarted by nature's wrath; after an initial basic trail was laid out, the flooding work of hurricane Irene washed the trail away, then again the same fall much tree damage caused by New Jersey's tree-toppling "Snowtober" made sections impassible, and finally by SuperStorm Sandy in 2012, which knocked over more than twenty mature trees like a forest version of 10-pin bowling! We took the hint and focused our efforts on cleanup and trail work at the other sections of the trail for the time being!

In 2015, with major financial support from The Horizon Foundation for New Jersey, and additional grant awards from the Garden Club of America/ New Jersey Chapter with the support of the Garden Club of Madison, New Jersey Conservation Foundation's Franklin Parker small grants program, and various corporate funded workdays with employees of Goldman Sachs, Verizon Wireless, and New Jersey American Water, a restoration and trail creation plan long in the making was realized at this property.

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Across the Watershed

is a publication of the **Great Swamp Watershed Association**.

GSWA is a member-supported non-profit organization that has been protecting the waters and the land of the Great Swamp Watershed for more than 30 years.

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and join the cause on

facebook.

CMA Stewardship *(continued from previous page)*

Over the winter the process began by first flagging, and then delineating a new trail route, maximizing hiking mileage, deviating around fallen trees, and meandering to pass the many interesting natural features of the property. With a small staff, and a big task such as this, volunteers are the essential lifeblood of an enhancement project of this type. 95% of all the stewardship work GSWA undertakes is done with volunteer labor. Community and corporate workdays bring many able bodies, with lots of energy, to help with tasks. GSWA's internal cadre of expert volunteers allow these larger groups to be divided into smaller task-focused teams, making the most efficient use of the labor and the materials.

Our workday season began in April with the hardy Northern New Jersey Geocachers, who, fueled by early morning coffee and donuts, got full body workouts heaving forkfuls of wood chips, then wheelbarrowing them many yards to create a springy trail base. Trail work continued using almost two hundred volunteers from many corporate and community workday partners such as Goldman Sachs, Verizon Wireless, New Jersey American Water, Great Swamp National Wildlife Refuge and Student Conservation Association volunteers.

Along with trail chipping, edging, and way marking, enhancements expanded to include enhancements at two of the vernal pools on the property. Berms were created to keep valuable water in these vital frog breeding ponds for just a little longer in spring so that frogs hatching in the pools may complete their growth cycle before the ponds dry up in the summer. As one exhausted volunteer, who had just finished planting almost 300 wetland herbaceous plants said, "All this is for frogs—really? Well why not, let's hear it for the frogs!"

Native shrubs now edge these vernal pools to create more valuable wildlife habitat. The shrubs also act as a screen for handmade wooden benches, where hikers can sit to enjoy the goings on in the pools and rest before continuing along the trail. Wildlife enhancements weren't just focused on frogs, and almost two dozen cavity nesting bird and wood duck boxes were erected around the property. Mammals and reptiles weren't forgotten either, and the many fallen limbs left over from Sandy were gathered and built into more than a dozen brush piles for small mammals and snakes to hunt and shelter in. This is the type of new home construction that GSWA can really get behind.

The kiosk at the head of the new Horizon Trail. From left: John Neale, GSWA trustee; Hazel England, GSWA Director of Land Stewardship; Sally Rubin, GSWA Executive Director; Rick Porter, GSWA Director of Institutional Relations; Filomena Machleder, Horizon Foundation for New Jersey; Michael Dee, GSWA Board chair; Nic Platt, Mayor of Harding Township; Wes Boyce, GSWA volunteer; Christine Myers, Morris County Freeholder candidate, Federico Nealon, GSWA volunteer.



Goldman Sachs volunteers
hard at work on the new
Horizon Trail.



More than 750 native shrubs, saplings and perennials have been installed at the property this year, many in small fenced enclosures to protect them from the ever present deer browse. These small fenced islands will allow the native plants inside to flower and set seed, acting as future seed sources to the neighboring acres as well as increasing the biodiversity in the understory at the site. As these plants grow, they will also screen adjoining parts of the trail, building the sense of quiet and solitude that a walk here provides, despite the site being just a stone's throw away from Interstate 287.

A beautiful, brand-new trail head kiosk was built by GSWA volunteers Federico Nealon and Wes Boyce. It displays maps and information about the property. Plans are also well underway for a local troop's eagle scout project which will add interpretive signs on the trail to point out important species and features for hikers.

On September 22nd, the newly completed Horizon Trail was officially opened. GSWA staff gathered with Horizon Foundation Program Officer Filomena Machleder, Harding Township Mayor Nicolas Platt and several key volunteers and board of trustee members to dedicate the mile-long scenic walkway that winds through preserved upland forest and passes by vernal pools and tranquil Silver Brook. The trail offers the ideal place for families to

get outside and be healthy, and to appreciate and learn more about the environment. As Ms. Machleder from Horizon stated in her comments at the ceremony " the Great Swamp Watershed Association's commitment to providing free, public spaces like this trail matches perfectly with the foundation's goal of promoting healthy recreation to combat childhood obesity and disease."

The goals for the Conservation Management area have always been that the property would be used for both recreation and education, and those twin goals will be met as hikers visit seeking a quiet place to enjoy the sights and colors of fall, dog walkers out for a quick stroll wander the trails, and GSWA conducts its many interpretive and educational programs at the new Horizon Trail section. There will be night hikes held at the site, where participants will listen for screech and barred owls, the plaintive calls of coyotes, and find their way in the woods after dark. Interpretive hikes will wander the trails focusing on native and invasive plants, how to identify them and their value for wildlife in the back yard.

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Watershed Watch— Environmental Hot Spots

by Sally Rubin, GSWA Executive Director

The *environmental hot spots* described below outline some of the Great Swamp Watershed Association's (GSWA) advocacy activities throughout the Great Swamp Watershed region over recent months. Where appropriate, we continue to closely monitor each situation.

Epic Preservation Win for Morris County and the Great Swamp Watershed

In June 2015, a 136-acre parcel of land, a portion of Giralda Farms located in Chatham Township, was opened to the public after many years of private ownership. The Great Swamp Watershed Association is proud to have played an important part in this landmark win for open space in Morris County.

Containing a biologically valuable mix of meadows, wetlands, upland forest, and lowland forest, the property was held for 57 years as part of the acclaimed Geraldine R. Dodge estate. Following Mrs. Dodge's death, the area became part of the privately held Giralda Farms Corporate Park. With only a few exceptions, the general public had no access the area's stunning rolling landscape.

The situation changed drastically in December 2014 when a \$14.1 million deal was struck that would return part of Giralda Farms to public use after the better part of a century. The acquisition became the single largest purchase in the history of Morris County's Open Space Trust Fund.

Most of the fundraising and deal making was driven by Chatham Township,

the Morris County Park Commission (MCPC), and the Open Space Institute. The Great Swamp Watershed Association (GSWA) also played an important role in the preservation of Giralda Farms.

The December 2014 deal conveyed title to the property to Chatham Township with management of the parcel being integrated into MCPC's larger 744-acre Loantaka Brook Reservation. A 2.3 mile network of walking trails was laid down along some of the Dodge estate's old carriage roads with more trails to come. MCPC also created a new connector trail along and across Woodland Road between the Giralda Farms and a nearby trailhead leading into the eight-mile trail system at the Reservation.

Executive Director Sally Rubin represented GSWA at the official ribbon ceremony on Saturday, June 6, 2015. The ceremony was made all the more poignant by taking place on National Trails Day.

Sally praised the entire accomplishment by lauding the creation of a larger green corridor for wildlife and increasing opportunities for healthy outdoor activities, such as walking and hiking, birdwatching, and outdoor photography. She also noted how far the purchase would contribute to the protection of water quality in Loantaka Brook—a sub-watershed within the Great Swamp Watershed region, where GSWA's water monitoring program has often measured levels of pollution in excess of state standards.

Securing Copper Springs – Advocacy Success in Long Hill Township


On May 14, 2015, Indoor Soccer, LLC, appeared before the Long Hill Township Committee to propose a significant change in zoning and expansion plans for the development of their new sports facility on a property along New Vernon Road customarily referred to a Copper Springs. Adjacent to the Great Swamp National Wildlife Refuge, the area currently includes a small pond with surrounding wetlands. The pond and the wetlands serve as wildlife habitat, and help reduce flooding and stormwater runoff problems in the Meyersville area.

Under the plan submitted on May 14, the company sought to expand its enterprise to include four new indoor sports domes capable of serving a larger client base. In addition to asking the Committee to enact a zoning change—reclassifying Copper Springs from a conservation zone to a recreation zone—

the original proposal called for a significant increase (from 30% to 40%) in impervious coverage on the parcels, and a number of other actions that would normally require variances approved by the Township’s Board of Adjustment and Planning Board.

When brought before the Long Hill Township Committee, the developer’s gambit to circumvent the two other Township boards, failed to pass on two different occasions. The developer must now propose his expansion plans to the Long Hill Board of Adjustment.

The successful defense of conservation zoning, habitat protection, and stormwater management, was largely carried on the back of comments and testimony given by the Great Swamp Watershed Association’s (GSWA) Executive Director Sally Rubin.

This triumph at Copper Springs represents a stellar environmental victory by GSWA’s advocacy program, and especially Sally, the advocacy program’s director. 

Across the Watershed is also available electronically

Help reduce our print and mailing costs by signing up for electronic delivery of future issues of *Across the Watershed* at GreatSwamp.org or send an e-mail with your name and address (so we can identify you in our member database) to sreynolds@GreatSwamp.org. By giving GSWA your e-mail address, you’ll also receive our monthly e-newsletter, which provides timely

information on upcoming programs and events along with news on what’s happening in and around the watershed.

Your e-mail address will be used solely for the purpose of sharing information with you about GSWA-related programs and events. We will not provide your e-mail address to any other person or entity without your permission.

Outdoor Programs

Want to explore the Great Swamp region? Then join the Great Swamp Watershed Association (GSWA) for one of our outdoor programs this fall or winter. These programs are fun, informative, and accessible for people of all ages and skill levels (unless otherwise noted). We'll see you outside!

Swamp Explorers for Kids Sunday, October 4, 10–11:30 a.m.

*GSWA Conservation Management Area,
1 Tiger Lily Lane, Harding Township, NJ*

Join Great Swamp Watershed Association's staff nature nut Kelly Martin as she lets the sprouts lead the way during this kid-centric day hike. Kids will be able to use magnifying glasses, nets, and other cool teaching tools to explore the world around them. Recommended for kids 6-10. Adults must remain present. Registration required. Register online at GreatSwamp.org or call (973) 538-3500 x22.

Columbus Day Explorers Monday, October 12, 10–11:30 a.m.

Giralda Farms, Woodland Road, Chatham Township, NJ

Embrace your inner Columbus and join Great Swamp Watershed Association to explore the new Giralda Farms preserve. Your guide, Hazel England, will help you to identify an array of flora and fauna. Recommended for adults or families with children. Registration required. Register online at GreatSwamp.org or call (973) 538-3500 x22.

GSWA Dog Walk Saturday, November 7, 1–2:30 p.m.

*GSWA Conservation Management Area,
1 Tiger Lily Lane, Harding Township, NJ*

Bring your pooch to explore the new Horizon trail at GSWA's Conservation Management Area in Harding. We'll investigate all of the smells, sounds, and sights that this new trail has to offer. Waiver and registration required. Register online at GreatSwamp.org or call (973) 538-3500 x22.

Stream Assessment Training Saturday, November 7, 9 a.m.–noon

*GSWA Office, 568 Tempe Wick Road,
Morristown, NJ*

If you are interested in becoming a stream monitoring volunteer or just learning more about stream health, this is the training for you! An indoor classroom session helps you learn how to conduct visual stream assessments and recognize environmental factors that may impact stream health. An outdoor session helps you practice your new-found skills at a local stream site. Afterwards, you will be a fully-trained stream assessment volunteer and ready to conduct a new assessment this fall! This training will be conducted in conjunction with the AmeriCorps New Jersey Watershed Ambassador Program.

Registration required. Register online at GreatSwamp.org or call (973) 538-3500 x22.

On Wednesday, June 3, 2015, RBC Wealth Management Parsippany Complex held its regular **Tour de Swamp**, an exercise (spinning) event designed to raise money for the Great Swamp Watershed Association's (GSWA) many water quality programs, including our chemical stream monitoring,



macroinvertebrate surveys, and summertime *E. coli* testing.

By the end of the spin class, our intrepid (and exhausted) fundraisers had earned \$1000 for GSWA. On June 25th, RBC Parsippany Complex Director Eric Siber officially presented GSWA Executive Director Sally Rubin with a signed check for all the money the spinners had earned. 🌲

Important Information About Events

Please register as requested for each program listed here (*see descriptions*). Unless otherwise noted, current GSWA members participate free of charge. Non-members are asked to make a voluntary donation of \$10/adult and \$5/child (6 to 17 years), or \$35/family (includes four or more). There is no suggested donation for children five or under.

Please dress for the weather when attending an outdoor program. Conditions may be wet, muddy, hot, or cold.

Event dates, times, and locations are subject to change. Provide your email address or phone number at registration and GSWA will make every effort to inform you about scheduling changes. Updated scheduling information will also be made available via our *Event Information Hotline* at (973) 538-3500 x22. 🌲

GSWA Experts Available to Speak to Area Groups

Do you wonder, “What is in my water?” or “What can I do to keep water clean for my children?” These and other questions about water quality, land preservation, and local efforts to protect the environment can be answered by the Great Swamp Watershed Association (GSWA). GSWA speakers give interesting, hands-on presentations that will educate and inspire members of your local club or group. Call (973) 538-3500 for more details.

Start Your Day with GSWA

Great Swamp Watershed Association's (GSWA) **Breakfast Briefing Speaker Series** has returned for Fall 2015!

Our seasonal **Breakfast Briefings** were developed to help busy professionals stay informed about community environmental issues without taking valuable time away from work or family life. Presentations are brief, focus on current environmental topics, and minimize overlap with most traditional business hours. Briefings are usually, although not always, held on the second Tuesday of the month from 8 to 9:30 a.m. **VERY IMPORTANT:** There is one notable scheduling exception this season. Our November 18 briefing—aka *Evening Briefing*—will take place on a Wednesday at 6 p.m. Please read all descriptions carefully.

Stay tuned for further events to be announced via email.

Know Someone Who Would Like to Become a Member?

GSWA relies on members like you to help protect our watershed's natural resources. So please pass this newsletter along, and encourage your friends and neighbors to join us! Visit GreatSwamp.org for more information.

All about Pollinators Tuesday, October 6, 8–9:30 a.m.

Helen C. Fenske Visitor Center, Great Swamp National Wildlife Refuge, 32 Pleasant Plains Rd., Harding Township, NJ

Spend the morning with Great Swamp Watershed Association as we talk about the different types of pollinators and how you can attract them to your garden. After a quick talk, we'll walk around the visitor center and look at their impressive solitary pollinator house. Registration required.

Seating is limited. Register online at GreatSwamp.org, or call (973) 538-3500 x22.



Photo by Kelly Martin

Blue Acres

Tuesday, November 10, 8–9:30 a.m.

*GSWA Office, 568 Tempe Wick Road,
Morristown, NJ*

Join us to learn about NJ's first county-level, dedicated flood acquisition program. Created in 2012, the Morris County Flood Mitigation Program has worked directly with 9 municipalities, closing on 55 projects, with 36 projects in progress. The program goal is to create open space and lower municipal costs by moving people out of harm's way. Our speaker will be Jennifer McCulloch, the founding Program Coordinator of Morris County's Flood Mitigation Program. A Certified Floodplain Manager (CFM), she has worked in land preservation for 13 years, focusing on the acquisition of open space, farmland and now flood-prone properties. She joined Morris County's Farmland Preservation group seven years ago, having previously worked with the Harding Land Trust and the Morris Land Conservancy.

Seating is limited. Register online at GreatSwamp.org, or call (973) 538-3500 x22.



Follow us at www.twitter.com/gswa

Evening Briefing: Historic Paterson & the Great Falls

Wednesday, November 18, 6–7:30 p.m.


*GSWA Office, 568 Tempe Wick Road,
Morristown, NJ*

Join us for a special evening presentation with Supervisory Park Ranger Ilyse Goldman as she shares with us the history of the newly designated Paterson Great Falls National Historic Park. Ilyse will discuss why Paterson was founded, its past industries, and what the park is doing to help reinvigorate the area.

Registration required. Seating is limited. Register online at GreatSwamp.org, or call (973) 538-3500 x22.

Important Information About Breakfast Briefings

Please register as requested for each program listed above (*see descriptions*). Unless otherwise noted, GSWA members participate free. Non-members are asked to make a voluntary donation of \$10/adult, \$5/child, or \$35/family (includes four or more). There is no suggested donation for children five or under. Programs are suitable for all ages, but structured for adults.

Event dates, times, and locations are subject to change. Provide your email address or phone number at registration and GSWA will make every effort to inform you about changes and cancelations. Updated scheduling information will also be made available via our *Event Information Hotline* at (973) 538-3500 x22. 

The Monarch Butterfly Express

by Jim Northrop, GSWA Volunteer

Monarch butterflies are unique — they're the only butterfly to travel thousands of miles when the seasons change. They travel from as far north as Ontario, Canada, all the way down to a few specific mountain tops in central Mexico. (Meanwhile, monarchs in western North America will over-winter in California.)

Monarch butterflies have four delicate wings, so we are asking: How do they do it? How do they migrate thousands of miles, and why?

The monarch is the only butterfly known to make a two-way migration, similar to what birds do. Unlike other butterflies that can over-winter as larvae, pupae or even as adults in some species, monarchs cannot survive the cold winters of northern climates. Using environmental cues, the monarchs know when it is time to travel south for the winter.

Monarch Flight Plans

Monarchs use a combination of air currents and thermals to travel long distances. Some fly as far as 3,000 miles to reach their winter home. Monarchs can travel between 50 and 100 miles a day. It can take up to two months to complete their journey. Also, it is amazing that monarchs know the routes to the over-wintering sites in Mexico, even though a given migrating butterfly generation has never before been to Mexico. Monarch butterflies have a keen sense of direction, even on cloudy days. This might be because they have some kind of “magnetic compass” that directs their

migration researchers speculate, in addition to navigating by the position of the sun.

Monarchs travel only during the day and need to find a roost at night. Monarchs gather close together during the cool autumn evenings. Roost sites are important to the monarch migration. Many of these locations are used year after year. Often pine, fir or cedar trees are chosen for roosting. These trees have thick canopies that moderate the temperature and humidity at the roost site.

Food For the Journey

Whether en route or “at home,” adult monarchs feed on the nectar from flowers, which contain sugars and other nutrients. Unlike monarch larvae that only eat milkweed, adult monarchs feed on a wide variety of nectar-bearing flowers. They will visit many different kinds of flowers in their search for food. Monarch butterflies that migrate south from breeding grounds in the northern U.S. and southern Canada stop in Texas to consume enough calories to power the last leg of their flight to the oyamel fir tree forests of central Mexico, and then to survive five months of wintering there. During the winter in Mexico, monarchs feed very little or not at all. As monarchs migrate south, they actually gain weight as they continue to feed on nectar-bearing flowers.

Here Come The Grandkids

When the monarchs in eastern North America leave their over-wintering sites in the spring, feeding on nectar is essential



Monarch Butterfly. Photo by Susan Budd

to making the journey north to Texas. Nutrition from early-spring nectar-bearing wildflowers also provides the energy and nutrients for these monarchs to develop their reproductive organs. When they arrive in Texas, the monarchs who spent the winter in Mexico, will find a mate, breed and then die. As the new monarchs emerge, they will make their way further north. It will take three more generations of monarchs to complete the journey northward, and then the migratory cycle starts once again.

Because monarchs split their round-trip migration between generations, their life cycles must be synchronized with those of the milkweed on which they lay their eggs. Monarchs returning from Mexico reach the Southeast soon after native milkweeds appear in spring, producing the first of up to three generations that breed on new

milkweed through the summer. When the perennials start dying back in the fall, a final (fourth) generation of butterflies typically emerges in a sexually immature state, and then fly to Mexico to wait out the freezing northern winter.

A Monarch Butterfly's Life Span

The total time for one monarch butterfly's life cycle (one generation) is about 6 to 8 weeks. In one generation, there are four stages: egg, larva (caterpillar), pupa (chrysalis), adult butterfly.

The monarch grows inside the egg for about four days. It then munches milkweed and grows as a monarch caterpillar (larvae) for about two weeks. The caterpillar consumes considerable milkweed and grows very rapidly. In fact, the growth is so rapid, the caterpillar needs to shed its skin five times before the pupate stage.

After the caterpillar is fully grown, it looks for a place to attach itself so it can begin the process of metamorphosis. It will attach itself to a stem or a leaf using silk, and transform into a chrysalis. Although, from the outside, the ten days of the chrysalis phase seems to be a time when nothing is happening, it is really a time of rapid change. Monarch wings are folded in the chrysalis. The monarch must pump up its wings using fluid stored in its abdomen. Within the chrysalis the old body parts of the caterpillar are undergoing a remarkable transformation, called metamorphosis, to become the

(continued on next page)

Staff Departures

Steve Howard, Director of Development, retired this past June. Steve worked with us for almost six years and brought a new level of professionalism to the development department as well as a witty sense of humor. We wish him and his wife, Alison, a long and enjoyable retirement. They certainly seem

to be enjoying it so far, with a recent trip to Scotland and an upcoming trip to France!

Steve Reynolds, Director of Communications and Membership, also recently left GSWA. Steve's creative graphic design work always made our gala invitation and scavenger hunt materials look amazing. His social media outreach filled our programs beyond capacity. We wish Steve the best. 🌱

Monarchs *(continued from previous page)*

beautiful parts that make up the butterfly that will emerge. The monarch butterfly will emerge from the pupa and fly away, feeding on flowers and just enjoying the short life it has left, which is only two to six weeks. The monarch will live from two to five weeks before reproducing and laying the eggs that will become the next monarch butterfly generation. Again, this first generation monarch butterfly will then die after laying eggs for generation number two.

The second generation of monarch butterflies is born in May and June, and then the third generation will be born in July and August. These monarch butterflies will go through exactly the same four-stage

life cycle as the first generation did, dying two to six weeks after it becomes a beautiful monarch butterfly. The fourth generation of monarch butterflies is a little bit different from



Monarch chrysalis. Photo by Blaine Rothausser

the first three generations. The fourth generation is born in September and October and goes through exactly the same process as the first, second and third generations except for one part. The fourth generation of monarch butterflies does not die after two to six weeks. Instead, this generation of monarch butterflies migrates to warmer climates like Mexico, and

will live for six to eight months until it is time to start the whole process over again. 🌱

Year Two of GSWA's Well-water Testing Draws Participants

by Kelly Martin, Membership & Education Associate

Great Swamp Watershed Association (GSWA)—in partnership with Kemmerer Library Harding Township and Garden State Labs—completed its second community well-testing day on April 30, 2015.

Private well owners from all over the watershed were invited to test their well water for coliform bacteria, nitrate, iron, lead, manganese, arsenic, herbicides, and other parameters. Forty participants from nine different towns took advantage of the bulk-discount rate in exchange for allowing GSWA to analyze their results and add them to our growing groundwater testing database.

Well water originates as precipitation that filters into the earth. As it soaks into the ground, it can dissolve materials that are present in the soil and cause the groundwater aquifers to become contaminated. Sometimes, these materials, such as bacteria, arsenic, iron, or manganese, are naturally occurring. Other times, contamination stems from human activities, including bacteria from leaking septic tanks, volatile organic compounds (VOCs) leaking from oil tanks, herbicides, pesticides, or improper disposal of household chemicals. Once the water reaches a well, it still has a chance to be contaminated on its way to the faucet by plumbing materials such as copper and lead pipes and fixtures.

Five of the forty well samples we tested were positive for coliform bacteria (and one of those also tested positive for *E. coli*). Most of the other exceedances we found this year seemed to be coming from elements that are present in the well system, not the ground water. This included lead, in which four out of the 40 samples tested exceeded the EPA's maximum contaminant level (MCL), and iron, which exceeded the MCL in two out of the 40 samples tested. Of the four people who elected to test for VOCs, zero samples tested positive. Of the four people who elected to test for herbicides or pesticides, zero samples tested positive.

GSWA looks forward to continuing and expanding this program. If you have any questions regarding well testing or desire to participate in the 2016 program, please feel free to contact me at kmartin@GreatSwamp.org, or (973) 538-3500 x19. 🏡

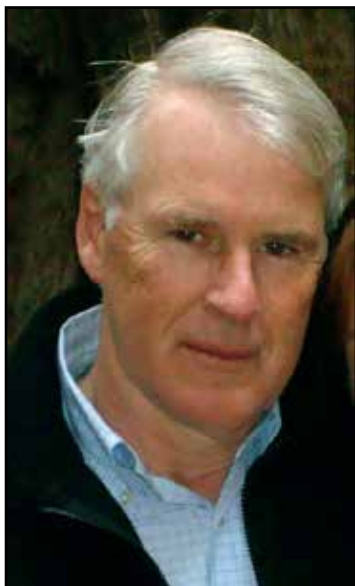
Interested in volunteering?

If you are interested in getting actively involved in efforts to protect and preserve the watershed, GSWA has a number of volunteer opportunities (see <http://GreatSwamp.org/how-you-can-help/volunteer-opportunities/>).

Please send an email to volunteer@GreatSwamp.org if you would like to volunteer!

2015 Gala Celebration

Great Swamp Watershed will hold its annual gala on **Wednesday, October 21, 2015**, at Brooklake Country Club in Florham Park, New Jersey. We will hold our annual meeting before the gala at 5:30 p.m. All members are invited to the annual meeting regardless of attendance at the gala. The gala cocktail hour and silent auction begin at 6 p.m. Dinner and presentations begin at 7:30 p.m. New Jersey Assembly Minority Leader Jon Bramnick will introduce our honoree, **Nicolas W. Platt**, Mayor of Harding Township, that evening.



Nic and his family have developed the 200 acre estate in Harding, known as Hartley Farms, into a truly unique community. The farm consists of vast meadows and dense old forests that have been protected for generations. The only way to preserve the property was to make the new homes secondary to the natural environment. The number of building sites was reduced to half that allowed under zoning regulations, strict architectural controls are enforced, the internal road system follows existing carriage paths to avoid removal of trees, and exterior lighting is restricted to protect the night sky.

Additionally, Nic led efforts to protect family owned property in Chatham which has now become playing fields, helped preserve another 150-acre family-owned farm in Chatham, and played an essential role in helping to preserve a large section of Giralda Farms last year.

The honorary co-chairs of the event, Finn and Kim Wentworth, said “Nic is a true visionary and open space advocate. Defenders of clean water and open space measures need to be celebrated; that is why we’ve chosen to support Nic and GSWA for this important recognition. As lifelong residents of NJ, we recognize and celebrate our beautiful region, which has been greatly enhanced by the Great Swamp Watershed visionaries and our friend Nic Platt.”

We hope you will join us to honor Nic Platt and celebrate Great Swamp Watershed Association on October 21st. Tickets are available online at GreatSwamp.org. Additionally, our spectacular silent auction is also available online. Check out some of the terrific items such as a week stay in Big Sky, Montana, a week stay in Ireland, fine wines, jewelry, and more!

Can I Kayak After it Rains?

by Laura Kelm, Director of Water Quality Programs

When we hear the terms “*E. coli*” or “bacteria,” bad things come to mind. You might think of outbreaks that make us avoid prepackaged spinach or some other food product. While there are harmful strains of *E. coli* that can make us sick, these strains aren’t usually found in our streams. The *E. coli* that we are looking for is an indicator of fecal contamination, which may contain viruses that can make us sick. *E. coli* is an indicator because the methods to look for it are fairly easy and low-cost, and we can assume that if the *E. coli* counts in water are high, there is a good likelihood that there may be harmful viruses in the same area.

In both 2014 and 2015, we saw that rain can increase *E. coli* levels. Oftentimes, rain also raises water levels at Fisherman’s Parking Lot, making for good kayaking. That is a conflict for me personally — do I avoid possible *E. coli* and fecal contamination from runoff, or do I enjoy a day on the Passaic River where I can actually kayak over the beaver dam at the confluence with Black Brook?

The purpose of GSWA’s *E. coli* monitoring program is to see how *E. coli* impacts our water-

bodies and convey that information to local residents. It is up to you to make your own decision about getting in the water or not. We want you to be able to make that decision with good information.

Here is how I solve my kayaking conundrum: I go kayaking after a rainstorm, but I try not to splash myself with the water. When I am done kayaking, I wash my hands or use an alcohol-based hand sanitizer, and shower when I get home (which is always a good idea after a hot day kayaking anyways!). I have a pretty good immune system, and I have not gotten sick from being in any water bodies in the Great Swamp watershed region — something I do very frequently for both recreation and my job.

My personal experience is not to say you won’t get sick; it is important to evaluate the situation based on where you are going, what level of interaction is possible, and the strength of your immune system. 🌲


Kayakers on the Upper Passaic by the beaver dam near the Fisherman’s Parking Lot.



GSWA Helps Plan New Jersey Confluence: Volunteer Water Monitoring Summit

A new summit, the New Jersey Confluence, is being planned to bring together water quality monitoring staff and volunteers from across the state for a day of workshops, networking, and idea sharing. The event is focused on groups who are already involved in, or would like to begin, water monitoring. There will be a variety of workshops on topics that will appeal to both beginners and experienced monitors, including *Getting Your Feet Wet: Intro to Different Types of Monitoring*, *Telling the Water Quality Story to the Public – Report Cards, Indices, and More*, and *Data Management and Data Analysis*. GSWA's director of water quality programs Laura Kelm will present on *Working with Students on Monitoring Projects*.


The New Jersey Confluence, hosted by The Watershed Institute and NJDEP, will take place on November 13 at the Watershed Reserve at the Stony Brook-Millstone Watershed Association in Hopewell, NJ. Registration will be open soon. For more info on the event or registration, e-mail Laura Kelm at lkelm@GreatSwamp.org.

Members of the planning committee include Laura Kelm (GSWA), Erin Stretz (Stony Brook Millstone Watershed Association), Nancy Lawler (Musconetcong Watershed Association), Kate Hutelmyer (The Watershed Institute), and Andrea Zasoski (NJDEP). 

CMA Stewardship *(continued from page 5)*

High school and college students studying water quality and ecology have already started to use the new trail. Students from Chatham High School AP Environmental Science classes spent three days at the site in September, performing baseline ecological surveys that they will build into a data base of knowledge about the forest's tree composition. As they survey the forest, learning real-life ecological field skills such as pacing, field identification and generating random sampling methodology, they will be able to relate the tree species catalogued to

the wetland or upland soil type upon which they grow. While they work and learn, they will be crossing the boardwalk bridges, and walking upon the wood chipped labors of the legions of GSWA volunteers that created the new trail this year.

We invite you to come and experience the trail and see the results of the collaborative labor of almost 2,000 volunteer hours expended at the site this year. Snap a photo of yourself resting on the benches or hiking the trails, send us a copy and let us know what you think. We'd love for you to visit! 

GSWA welcomes Nicole Altneu as our new Director of Development

It is a great pleasure to join the Great Swamp Watershed Association and I thank you for giving me a very warm welcome. Many have asked me why I joined GSWA and I can honestly say it is because of the staff, members, and the mission. Did you ever have that “it was the right fit” feeling? I had it the moment Sally Rubin gave me a big hug after my second round of job interviews.

I do not need to tell you, we are at a pivotal and crucial time in history. Future generations will judge our current actions or our lack of action. With over 400 parts per million of carbon dioxide in the atmosphere, we do not have any time to waste. As I write this note, more than twenty-one devastating wildfires are burning in California and homes in Tampa, Florida, are under water. And sadly, we are now in the midst of a mass extinction of plants and animals. Our mission at the Great Swamp Watershed Association is critical. We must continue to preserve and protect our waters and our land. And we must continue to teach others the value of a healthy environment.



At the end of September I will have the honor to again work with former Vice President Al Gore as a Climate Mentor. I will be in Miami, Florida, and will help Mr. Gore train new Climate Leaders. Like me, they will work to implement solutions for climate change and inspire others to do the same. I have held senior positions in development at Rutgers University and on Wall Street, and speak three foreign languages. As part of the GSWA team, I seek to inspire you to reduce your carbon footprint and ensure a better future for children and our wildlife.

I thank you for being a GSWA member and supporter. If you are new to our organization, please join me and make a positive difference for the future. Your support and financial commitment provide critical backing for our programs.

With much gratitude,
Nicole Altneu
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GSWA is blogging at
<http://GreatSwamp.org/blog>



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